

Peaceful Nuclear Cooperation

U.S. Support for NPT Article IV

UNITED STATES & VIETNAM

Through the International Atomic Energy Agency (IAEA), the United States contributes to the work of many countries using nuclear materials and technology for peaceful purposes. In recent years, U.S. support has focused on achieving tangible and lasting benefits in fields that are vital to human development, including agriculture, human health, water resource management, and human resource development. Since 2000, the IAEA has approved and funded \$9,385,075, including \$391,139 in 2013, under its Technical Cooperation (TC) program for projects in Vietnam.



In addition to the United States' longstanding support for the IAEA's activities to promote peaceful nuclear applications, at the 2010 NPT Review Conference, the United States announced a \$100 million USD effort to expand this support over the next five years. The United States has pledged \$50 million towards the IAEA's Peaceful Uses Initiative (PUI), focusing on human health, food security, water resource management, and nuclear power infrastructure development.

The United States views its support for peaceful uses of nuclear energy, to which all NPT Parties are entitled, as a critical part of its broader effort to strengthen the IAEA and the global nuclear nonproliferation regime. The U.S. has already designated over \$22 million for IAEA projects benefitting over 120 countries, including Vietnam, for which funding was previously unavailable. The United States is working with partners to reach the \$100 million goal, and welcomes commitments of over \$12 million from Japan, the Republic of Korea, New Zealand, the Czech Republic, Hungary, Sweden, Australia, France, Indonesia, Brazil, Italy, the UK and Kazakhstan.

NUCLEAR ENERGY

An increasing number of Member States are considering nuclear power as part of their electricity generation options, and those Member States need comprehensive and credible information on nuclear power issues such as cost and benefit, energy security

and environmental impact to support their decision making.

Vietnam recently participated in a regional TC project supported by the United States that provided comprehensive information to Member States to support their decision making regarding nuclear power planning and development.

Vietnam is also working through a national TC project supported by the United States to plan and develop a nuclear power infrastructure to meet requirements for the construction and operation of the country's first nuclear power plant.

NUCLEAR SAFETY

Disused facilities and sites contaminated because of activities involving the use of radioactive material exist worldwide and many pose continuing health risks to adjacent communities and, potentially, to the wider public.

Vietnam is currently participating in an interregional TC project supported by the United States that will provide support and assistance toward the efficient clean-up of radioactive contaminated facilities and sites. Through this project, barriers to the acceptance of continued or expanded applications of peaceful uses of nuclear technology can, to some extent, be removed.

Vietnam also recently participated in a regional TC project supported by the United States to strengthen the remaining elements of its national regulatory framework for radiation safety to meet international safety standards as well as to establish a regional network of regulatory authorities to exchange information and share experiences.

1. *Power plant under construction. Credit: Kansai Electric Power Co.*
2. *Standard maintenance check. Credit: Arthur -Bertrand*
3. *Verifying a load of Highly Enriched Uranium fuel before it is brought back to Russia. Credit: Dean Calma/IAEA*

NUCLEAR FUEL

Recently, several countries, including Vietnam, participated in U.S.-supported regional TC projects to convert research reactor cores from highly enriched uranium (HEU) to low enriched uranium (LEU) and facilitate the return of highly enriched and low-enriched uranium to the country of origin. The projects assisted participating countries with research reactors to repatriate, manage, or dispose of their fresh or irradiated fuel, and supported the Russian Research Reactor Fuel Return program and the Global Threat Reduction Initiative.

ENVIRONMENT

Vietnam is currently participating in a regional TC project supported by the United States to evaluate the extent and possible impact of the releases of radioactivity from the Fukushima Daiichi nuclear power plant into the marine environment and make scientific assessments of the data.

HUMAN HEALTH

One of the greatest challenges developing countries face in fighting cancer is devising plans for building cancer control capacity. In recognition of this, the IAEA's Programme of Action for Cancer Therapy (PACT) has developed PACT Model Demonstration Sites (PMDS) in eight

Member States, including Vietnam. These sites, supported with contributions from the United States, aim to demonstrate the effectiveness of evidence-based strategies and the benefits of synergic partnerships for the advancement of comprehensive cancer capacity building. The PMDS benefit from provision of radiation medicine equipment, expert missions, and additional cancer control capacity building activities.

Vietnam is participating in a project, coordinated by the IAEA's Department of Nuclear Sciences and Applications and supported by the United States, to strengthen biological dosimetry in the Asia and the Pacific region. The project aims to increase the preparedness of participating Member States to react to national and regional radiation and nuclear accidents by establishing suitable standards to monitor individuals exposed to radiation; updating existing technologies and introducing new technologies; and initiating national, regional and interregional networks on biological dosimetry which can be engaged in scenarios of mass casualties.

HUMAN RESOURCES

To contribute to Member States' manpower development, the IAEA

awards individual fellowships and organizes group training courses. Every year, numerous fellows and training course participants travel to the United States for training in various peaceful uses of nuclear technology and return to their home country to apply the lessons learned.

Since 2000, the United States has hosted multiple training courses that included Vietnamese participants in fields such as nuclear security, research reactor safety, decommissioning, methods for watershed management, insect pest control, radiotherapy, maintenance of nuclear instrumentation, and introducing and expanding nuclear power programs. Training was also provided through the IAEA Fellowship Program to 31 Vietnamese, two of which were sponsored by the United States, in fields including nuclear medicine imaging, nuclear power plant planning and pre-operational support, radioanalytical techniques, radiation technologies and tracer techniques for industrial processes, and safety standards, regulations and procedures.

Additionally, since 2000, 29 U.S. experts have traveled to Vietnam to collaborate through various IAEA Technical Cooperation projects.

Through bilateral efforts, the United States has provided direct support to Member States through various collaborative projects such as the exchange of information, expert visits, and training of personnel.

In August 2007, the U.S. Department of Energy (DOE) signed an arrangement with Vietnam's Ministry of Science and Technology for the exchange of information and cooperation in peaceful uses of nuclear energy.

In January 2008, DOE laboratories provided technical assistance to

Vietnam in fields such as radiation protection and health physics, research reactor operations, and radioactive waste management.

In June 2008, an arrangement was made between the Vietnam Agency for Radiation and Nuclear Safety and Control (VARNSAC) and the U.S. Nuclear Regulatory Commission.

Additionally, the U.S. International Nuclear Safeguards and Engagement Program (INSEP) collaborated with Vietnam in radiation protection and health physics, research reactor operations and utilization, environmental radiological

surveillance, low and intermediate-level radioactive waste management, development of national regulations for nuclear power, Additional Protocol implementation, and State System of Accounting and Control development.

In 2009, DOE provided \$643,000 to Vietnam to further assist with activities in these fields and in 2010, \$1,382,000. In 2012, DOE contributed \$272,000.

Additionally, since 2000, eight Vietnamese physicians have been certified in the U.S. through the American Board of Nuclear Medicine.

FOR ADDITIONAL INFORMATION, CONTACT:

Office of Multilateral Nuclear and Security Affairs, U.S. Department of State, 2201 C. Street NW, Washington, DC 20520 | www.state.gov